CLAIMS

1. A multiple band antenna, comprising:

an RF coupling structure with an RF drive end and an RF coupling end; and

a resonant RF structure coupled to the RF coupling end, the resonant RF structure having a first end and a second end, the resonant RF structure comprising a conductive perimeter enclosing at least one slot area configured to induce an additional resonant RF band for the resonant RF structure.

2. The multiple band antenna of claim 1, wherein the RF coupling end is substantially symmetrical.

3. The multiple band antenna of claim 1, wherein the RF coupling structure is conductively coupled to the resonant RF structure so as to induce resonance within a pre-selected RF band.

4. The multiple band antenna of claim 1, wherein the RF coupling structure is on a plane that is different from the plane of the RF resonant structure, and further, the parts of the RF coupling structure are not on the same planes.

5. The multiple band antenna of claim 1, wherein the resonant RF structure is formed from conductors on a printed circuit board.

6. The multiple band antenna of claim 1, further comprising a reactive loading tab that substantially bisects one of the at least one slot area, the reactive loading tab conductively connected to the conductive perimeter at two physical points, the two points on opposite sides of the resonant RF structure .

7. The multiple band antenna of claim 1, wherein the RF coupling structure is reactively coupled to the resonant RF structure so as to induce resonance within a pre-selected RF band.

8. The multiple band antenna of claim 7, wherein the RF coupling end is capacitively coupled to the resonant RF structure so as to induce resonance within a pre-selected RF band.

9. The multiple band antenna of claim 1, further comprising at least one reactive loading tab that is located within one of the at least one slot area and positioned so as to enhance radiation in one of the additional RF band and a further additional RF band.

10. The multiple band antenna of claim 9, wherein the at least one reactive loading tab is conductively connected on at least one point to the conductive perimeter.

11. The multiple band antenna of claim 1, further comprising a ground plane reactively coupled to the first end and the second end of the resonant RF structure .

12. The multiple band antenna of claim 11, wherein the RF drive end comprises an interface comprising a first connection to an RF feed and a second connection to at least one of the ground plane or a second RF feed that is substantially out of phase with the first RF feed.

13. The multiple band antenna of claim 11, wherein the ground plane comprises a conductive area on a first layer of a circuit board and at least one additional conductive layer on another layer of the circuit board.

14. A wireless communications section, comprising:

at least one of a receiver for wirelessly receiving transmitted signals and a transmitter for wirelessly transmitting signals; and

an antenna, communicatively coupled with the at least one of a receiver and a transmitter, the antenna comprising:

an RF coupling structure with an RF drive connection and an RF coupling end; and

a resonant RF structure reactively coupled to the RF coupling end, the resonant RF structure having a first end and a second end, the resonant RF structure comprising a conductive perimeter enclosing at least one slot area configured to induce an additional resonant RF band for the resonant RF structure.

15. A wireless device, comprising:

at least one of a receiver for wirelessly receiving transmitted signals and a transmitter for wirelessly transmitting signals;

a baseband processing portion, communicatively coupled to the at least one receiver and transmitter, for processing at least one of data, voice, image and video signals in order to interface with at least one of the receiver and the transmitter; and

at least one antenna, electrically coupled to the at least one receiver and transmitter, the at least one antenna comprising:

an RF coupling structure with an RF drive connection, electrically coupled to the at least one receiver and transmitter, and an RF coupling end; and

a resonant RF structure reactively coupled to the RF coupling end, the resonant RF structure having a first end and a second end, the resonant RF structure comprising a conductive perimeter enclosing at least one slot area configured to induce an additional resonant RF band for the resonant RF structure.

16. The wireless device according to claim 15, wherein the at least one antenna comprises at least one first antenna and at least one second antenna, the at least one first antenna being coupled with the receiver for wireless receiving and the at least one second antenna being coupled with the transmitter for wireless transmitting.

17. The wireless device according to claim 15, wherein the at least one antenna comprises at least one first antenna and at least one second antenna, the at least one first antenna and the at least one second antenna being arranged to provide spatial diversity.

18. A wireless communication circuit, comprising:

at least one of a receiver circuit for wirelessly receiving transmitted signals and a transmitter circuit for wirelessly transmitting signals; and

an antenna, communicatively coupled with the at least one of a receiver circuit and a transmitter circuit, the antenna comprising:

an RF coupling structure with a first RF coupling end, communicatively coupled with the at least one of a receiver circuit and a transmitter circuit, and a second RF coupling end; and

a resonant RF structure reactively coupled to the second RF coupling end, the resonant RF structure having a first end and a second end, the resonant RF structure comprising a conductive perimeter enclosing at least one slot area configured to induce an additional resonant RF band for the resonant RF structure.

19. The wireless communication circuit of claim 18, wherein the first RF coupling end is selectively communicatively coupled with the at least one of a receiver circuit for receiving wireless transmitted signals and with the transmitter circuit for wirelessly transmitting signals.

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